

IN THE CLAIMS:

Please cancel claims 1-5, 11 and 13 without prejudice or disclaimer, amend claims 6-10 and 12, and add new claims 14-21 as follows:

1-5. (Cancelled)

6. (Currently Amended) A method for producing [[the]] semiconductor nanoparticles comprising: according to claims 1 wherein

stabilizing a plurality of semiconductor nanoparticles in a solution;

irradiating the semiconductor nanoparticles with light to photo-dissolve semiconductor nanoparticles with undesirable diameters therefrom thereby extracting semiconductor nanoparticles of a predetermined average size and a predetermined deviation;

chemically modifying surfaces of the extracted semiconductor nanoparticles obtained from the irradiating step with a thiol compound thereby forming a complex; and

reacting a compound having a hydroxyl group is allowed to react with the modified surfaces of the semiconductor nanoparticles thereby binding a group -OY to the modified surfaces of the semiconductor nanoparticles for stabilization, Y being selected from a hydrogen atom, a metal atom, a semimetal atom, an organic group, or an organic group that is intermediated by a metal atom or a semimetal atom.

7. (Currently Amended) [[A]] The method for producing [[the]] semiconductor nanoparticles according to claim[[s]] 6, wherein the modified semiconductor nanoparticles are placed in an alkaline environment.

8. (Currently Amended) [[A]] The method for producing [[the]] semiconductor nanoparticles according to claim[[s]] 6, wherein the modified semiconductor nanoparticles are allowed to react with an active hydrogen-containing compound in an alkaline environment.

9. (Currently Amended) The method for producing semiconductor nanoparticles according to claim 7, wherein the alkaline environment is between pH 9 and pH 11.
10. (Currently Amended) The method for producing [[the]] semiconductor nanoparticles according to claim[[s]] 6, wherein the semiconductor nanoparticles are subjected to surface modification and purification.
11. (Cancelled).
12. (Currently Amended) The method for producing semiconductor nanoparticles according to claim 10, wherein the number of the layers of atoms equivalent to an oxide film is at least [[0]] one on [[in]] the surfaces ~~modification~~ of the modified semiconductor nanoparticles.
13. (Cancelled)
14. (New) The method for producing semiconductor nanoparticles according to claim 6, wherein the group -OY is an -OH group.
15. (New) The method for producing semiconductor nanoparticles according to claim 6, wherein a material for cores of the semiconductor nanoparticles is selected from ZnO, ZnS, ZnSe, ZnTe, CdO, CdS, CdSe, CdTe, HgS, HgSe, HgTe, InP, InAs, GaN, GaP, GaAs, TiO₂, WO₃, PbS, and PbSe.
16. (New) The method for producing semiconductor nanoparticles according to claim 6, wherein diameters of the semiconductor nanoparticles obtained from the irradiating step are monodispersed with deviations of less than 10% rms.
17. (New) The method for producing semiconductor nanoparticles according to claim 6, wherein the modified semiconductor nanoparticles emit fluorescence in a narrow spectrum range of 60 nm or less in terms of the full width at half maximum (FWHM) upon applying excitation light.

18. (New) The method for producing semiconductor nanoparticles according to claim 6, wherein diameters of the semiconductor nanoparticles obtained from the irradiating step are monodispersed with deviations of 6% rms.
19. (New) The method for producing semiconductor nanoparticles according to claim 6, whereby the providing step, the plurality of semiconductor nanoparticles are stabilized with hexametaphosphoric acid in a solution
20. (New) The method for producing semiconductor nanoparticles according to claim 19, further comprising: purifying the semiconductor nanoparticles in the solution obtained after the irradiating step with mercaptopropionic acid.
21. (New) The method for producing semiconductor nanoparticles according to claim 20, further comprising: ultrafiltrating the purified solution to remove methyl viologen, hexametaphosphoric acid, unreacted thiol compound, photo-dissolved irons therefrom.